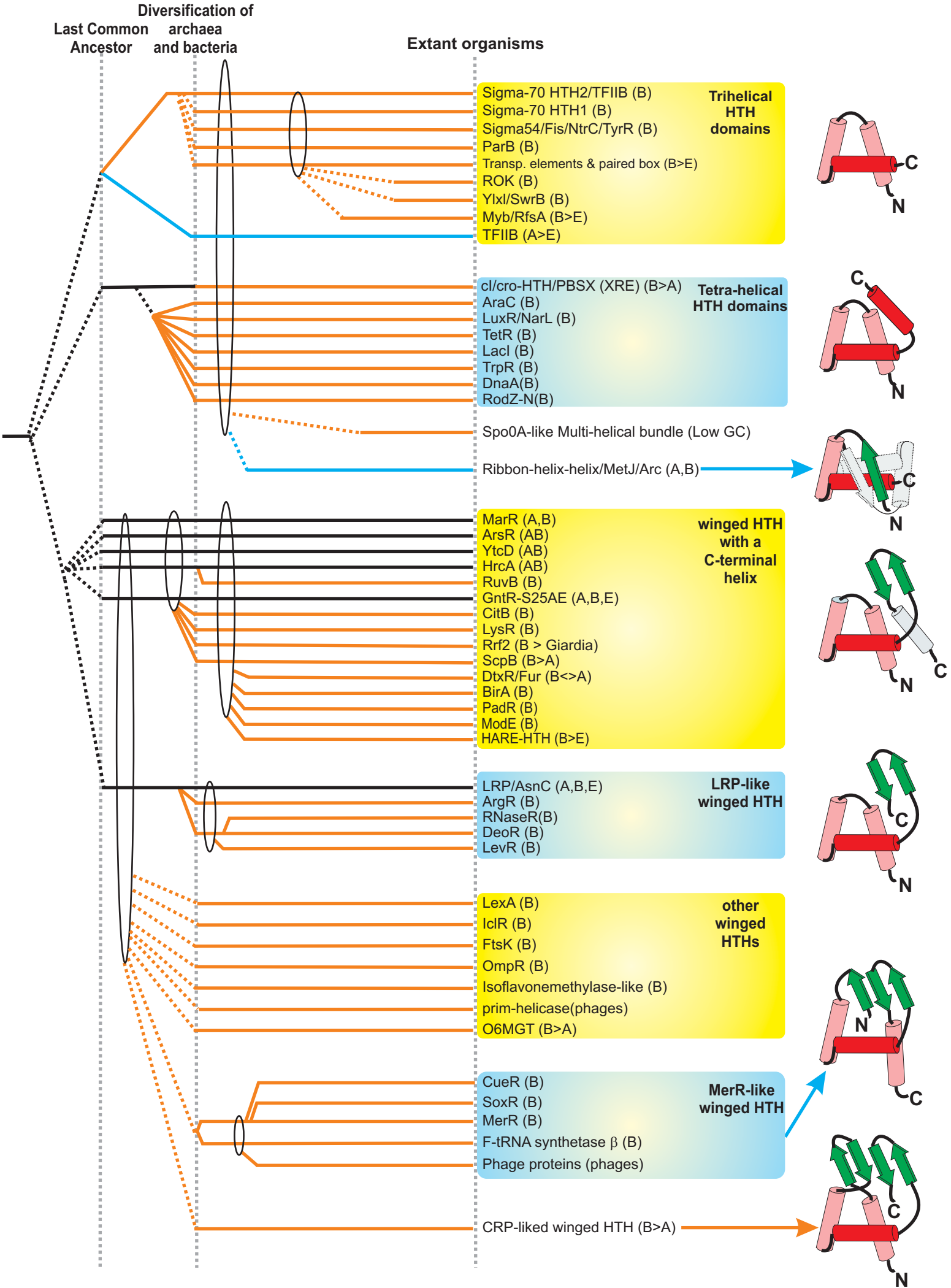
Last Common Ancestor
Diversification of archaea and bacteria
Extant organisms
Sigma-70 HTH2/TFIIB (B)
Sigma-70 HTH1 (B)
Sigma54/Fis/NtrC/TyrR (B)
ParB (B)
Transp. elements & paired box (B>E)
ROK (B)
YlxI/SwrB (B)
Myb/RfsA (B>E)
TFIIB (A>E)
Trihelical HTH domains
C
N
cI/cro-HTH/PBSX (XRE) (B>A)
AraC (B)
LuxR/NarL (B)
TetR (B)
LacI (B)
TrpR (B)
DnaA(B)
RodZ-N(B)
Tetra-helical HTH domains
C
N
Spo0A-like Multi-helical bundle (Low GC)
Ribbon-helix-helix/MetJ/Arc (A,B)
C
N
MarR (A,B)
ArsR (AB)
YtcD (AB)
HrcA (AB)
RuvB (B)
GntR-S25AE (A,B,E)
CitB (B)
LysR (B)
Rrf2 (B > Giardia)
ScpB (B>A)
DtxR/Fur (B<>A)
BirA (B)
PadR (B)
ModE (B)
HARE-HTH (B>E)
winged HTH with a C-terminal helix
C
N
LRP/AsnC (A,B,E)
ArgR (B)
RNaseR(B)
DeoR (B)
LevR (B)
LRP-like winged HTH
C
N
LexA (B)
IclR (B)
FtsK (B)
OmpR (B)
Isoflavonemethylase-like (B)
prim-helicase(phages)
O6MGT (B>A)
other winged HTHs
N
C
CueR (B)
SoxR (B)
MerR (B)
F-tRNA synthetase β (B)
Phage proteins (phages)
MerR-like winged HTH
CRP-liked winged HTH (B>A)
C
N